

5 240

Kalendarium Nauticum:
Ephemerides
The Sea-man's
ALMANACK,

For the Year of Christ, 1676.

Being Bissextile, or Leap-year.

Comprising not onely such things as are usually contained in other Annual Almanacks, but accommodated with such *Precepts, Rules, and Tables*, as are of daily use in the Practise of

NAVIGATION and TRAFFICK.

Principally referred to the
Meridian of **LONDON;**

With Directions how it may become useful in any part of the World, and especially to the Kingdoms of

England, Scotland, and Ireland.

By **HENRY SEAMAN**, Marriner.

London, Printed by T. N. for the Company of Stationers. 1676.

The Common Notes and moveable Feasts for Seven Years,
viz. from 1673, to 1680. in both Accounts.

English Account						Foreign Acc.					
Year of our Lo.	Year of Gol.N.	Epist.	Letter	Sunday	Shrove Sunday	day, Easter	Whit- Sunday	Whit- Sunday	Easter day	Letter	Sunday
1673	2	22	C	Fe. 10	Ma. 30	Ma. 19	Ma. 21	Ap. 2	C		
1674	3	3	D	Mar. 1	Ap. 19	June 7	Jul. 10	22	D		
1675	4	14	E	Fe. 14		Ma. 23	2	14	E		
1676	5	24	F	Fe. 6	Ma. 26	Ma. 14	Ma. 24	Apr. 5	F		
1677	6	6	G	25	15	Jun. 3	Jun. 6	18	G		
1678	7	17	H	10	Ma. 31	Ma. 19	Ma. 29	10	H		
1679	8	28	I	Mar. 2	Ap. 20	Jun. 8	Jul. 11	23	I		

The Terms, and their Returns.

Mary Term begins Jan. 24. Ends Feb. 12.	Trinity Term begins May 26. Ends June 14.
Octab. Hil. Jan. 21.	Craft. Trin. May 22.
Quind. Hil. Jan. 27.	Octab. Trin. May 29.
Craft. Purit. Feb. 3.	Quind. Trin. June 5.
Octab. Purit. Feb. 10.	Tref. Trin. June 12.
Easter Term begins Apr. 12. Ends May 8.	Michaelmas Term begins Octob. 23. Ends Nov. 28.
Quind. Pasch. Apr. 10.	Tref. Mich. Octob. 20.
Tref. Pasch. Apr. 17.	Mens. Mich. Octob. 27.
Mens. Pasch. Apr. 24.	Craft. Anim. Nov. 3.
Quind. Patch. May 1.	Craft. Mart. Nov. 12.
Craft Ascen. May 5.	Octab. Mart. Nov. 19.
	Quind. Mart. Nov. 27.

Of the Four Quarters of the Year.

SPRING begins the 9 day of March, at 39 min. after 3 in the Afternoon.

SUMMER begins the 11 day of June, at two min. before 5 in the morning.

AUTUMN begins the 11 day of September, at 26 min. after 10 in the forenoon.

WINTER begins the 11 day of December, at 10 min. after 2 in the Morning. Of

Of the Eclipses this Year, 1676.

THERE will be two Eclipses this Year, and both of them of the Sun.

The first of these Eclipses will be upon Thursday the first day of June, and may be seen in England, Scotland, and Ireland, from the beginning thereof unto the end.

The Beginning will be at 8 min. after 7. in the Morn.

The Middle at 26 min. after 8. of the Clock, and

The End will be at 42 min. after 9. so that the whole duration will be 2 hours and 34 min.

The parts of the Sun's body darkned, will be near 5 Digits. In the Canary Islands it will appear Total.

The second Eclipse will be upon the 25 of November, in the morning, the Sun that day Rising Eclipsed, and the greatest obscuration of the Sun's body will be over, before the Sun Rises; for that day, at London, the Sun rises not till 6 min. after 8. and the middle of the Eclipse will be a quarter of an hour before; so that if the Air be clear, the end thereof may be seen.

Besides these two Solar Eclipses, this year, there will happen upon S. Swythins day, the 15 of July, a very Remarkable Conjunction of the Planets, Saturn and Mars, with the Pleiades, or Seven Stars, and may be seen in the East part of the Horizon, a little after Midnight, and will be worth the observing, both here in England, and in other parts of the World, as being a great help towards the Restauration of Astronomy.

THE glorious Planet VENUS will be our bright Evening Star, from the beginning of the Year, till the 29 of August, on which day she will be in Conjunction with the Sun; after which time, she will be a Morning-Star to the end of the Year.

A Table

**A Table to find the time of the Tides in the chiefeſt
Ports, in and near this Kingdom.
The Moon is South at**

<i>Days after the Change and Full</i>									
0	1	2	3	4	5	6	7		
12	12 48	1 36	2 24	3 12	4 00	4 48	5 36		
<i>Days after either of the Quarters at</i>									
0	1	2	3	4	5	6	7		
6	6 48	7 36	8 24	9 12	10 00	10 48	11 36		

h. qua	Southampton. Portsmouth. Quinborough, Wellings.	
0. 3.	Rye, Callis, Calshot, Winchelsey, Gorend.	
1. 2.	Dover, Harwich, Wight, Yarmouth, Bulloign.	
2. 1.	Needles, Deep, Casket, Lux, Lenow, Orf. Layst.	
3. 0.	Orkny-pool, Orwel, S. Hel. Flee, Eams, Emden.	
3. 3.	Portland, Peter p. Hareſlew, H. gue, Blanchey.	
4. 2.	Milford, Bridgewater, N. coast, Exwater, Texel.	
5. 1.	Bristow, Lanion, Foulneſs.	
6. 0.	Lin, Humb. Waymouth, Primm. Antw.	6. hou.
	Aberden, Redban, Rochester, Malden, W. of N.	0. 3.
	Graveſend, Downs, Romney, Tenet, Ramkins.	1. 2.
	Dundee, S. Andr. Lisbon, Silly, Maz, S. Lucas.	2. 1.
	London, Tinn. Hartlep. Amſterd. Glasgoign.	3. 0.
	Barwick, Oſtend, Scarb. Fount. Flambor. Fluſh.	3. 1.
	Friſh, Leith, Dunb. Lawr. Bloy, Monſh. Egmont.	4. 2.
	Falmoth, Foy, Garnſey, Severn-m. Waterford.	5. 1.

When you have found by the Almanack, & the upmoſt Table, the day the Moon is at S. then look for the Haven or Port you deſire; and if the hours and quarters ſtand before the Port, there it is High-water ſo many hours & quarters before the Moon comes at South: But if the hours and quarters ſtand after the Port, there it is High water ſo long after the Moon is at South.

As for Example.

By the firſt Tables you find, the Moon is South at 4 a clock, 5 days after the Change, which ſhews it is at that time Full-Sea at Portsmouth, &c. at Dover, Harwich, &c. an hour and half ſooner, viz. at 1 a clock and 30 minutes: But at London, Tinnmouth, &c. 3 hours after, viz. at 7 a clock.

January hath xxxi days.

d.	h.	m.		13 d. Satu	} Is with the Moon.
New Mo. 5	4	38	M	3 d. Jup	
First Qu. 12	8	57	N	3 d. Mar	
Full Mo. 20	7	00	N	6 d Ven	
Last. Qu. 27	6	09	N	14 d. Mer	

1	a	1. years day	Sagi.	22	1	51	4	25	11	d
2	b	8 00	4 00	16	21	41	4	21	12	e
3	c	7 58	4 2	Capric	00	21	31	4	17	13 f
4	d	7 57	4 3		15	21	20	4	13	14 g
5	e	7 56	4 4		29	21	9	4	9	15 a
6	f	Twelfth day	Aquar.	13	20	58	4	4	16	b
7	g	7 54	4 6		26	20	48	4	0	17 c
8	a	Lucie	4 8	Pices	9	20	34	3	56	18 d
9	b	1. aft. Epiph.			22	20	21	3	51	19 e
10	c	Sun in Aqu.	Aries	4	20	8	3	3	47	20 f
11	d	7 49	4 11		16	19	55	3	43	21 g
12	e	7 47	4 13		11	28	19	4	3	22 a
13	f	7 46	4 14	Taurus	10	19	27	3	34	23 b
14	g	Hillary B.			22	19	13	3	30	24 c
15	a	7 44	4 16	Gemini	4	18	58	3	26	25 d
16	b	2. aft. Epiph.			16	18	41	3	23	26 e
17	c	7 41	4 19		3	28	18	28	9	18 27 f
18	d	7 39	4 21	Canc.	8	18	27	3	14	28 g
19	e	7 38	4 22		1	23	17	55	3	10 29 a
20	f	Fabian		Leo	7	17	39	3	6	30 b
21	g	Agnes			20	17	21	3	2	31 c
22	a	Vincent		Virgo	4	17	5	2	57	32 d
23	b	Septuages.			18	16	47	2	53	2 e
24	c	Term begins	Libra	12	16	30	22	50	3	3 f
25	d	Conv. S. Pau			16	16	17	2	45	4 g
26	e	7 26	4 34	Scorp.	00	15	53	2	41	5 a
27	f	7 25	4 35		14	15	35	2	37	6 b
28	g	Agnes.			28	15	16	2	33	7 c
29	a	7 21	4 39	Sagit.	12	14	57	2	29	8 d
30	b	St. Ch. I. Mar			26	14	38	2	25	9 e
31	c	7 18	4 42	Capr.	10	14	19	2	22	10 f

South Declination, Decreasing.

Complement of the Suns Right Ascension at Mi Inight.

February hath xxix days.

	d.	h.	m.		9 day Saturn	
New Mo.	3	6	39	N.	28 day Jupit.	} is with the Moon.
First Qu.	11	4	49	N.	29 day Mars	
Full Mo.	19	9	50	M.	5 day Venus	
Last Qu.	26	1	00	M.	4 day Mercu.	

Mo. da.	Weda.	Fix. & Mov.	The Sign	The ☉	Comp.	For.
		Feasts.	the Moon	Declina	Right	Acco.
		☉ R. ☉ S.	is in.	tion.	Ascen.	
1	D	7 17 4 43	Capr.	24 13	59	2 18 11 g
2	E	Purif. Mary	Aqua.	8 13	39	2 14 12 a
3	F	7 14 4 46		21 13	19	2 10 13 b
4	G	7 13 4 47	Pisces	4 12	58	2 6 14 c
5	A	Agathy		17 12	38	2 2 15 d
6	B	St. Andrew Sun.	Aries	00 12	17	1 58 16 e
7	C	7 8 4 52		12 11	56	1 54 17 f
8	D	Shrovv. Tues.		24 11	34	1 50 18 g
9	E	Ash Wednes	Taur.	6 11	13	1 46 19 a
10	F	Sun. in Pisces		18 10	51	1 43 20 b
11	G	6 59 5 1	Gem.	00 10	30	1 39 21 c
12	A	Term ends		11 10	8	1 35 22 d
13	B	St. Sun. in L.		23 9	46	1 31 23 e
14	C	Valentine.	Canc.	6 9	24	1 27 24 f
15	D	6 54 5 6		18 9	11	1 24 25 g
16	E	6 53 5 7	Leo	1 8	39	1 20 26 a
17	F	6 51 5 8		14 8	17	1 16 27 b
18	G	6 49 5 11		28 7	54	1 12 28 c
19	A	Abine	Virgo	13 7	31	1 8 29 d
20	B	St. Sun. in L.		27 7	9	1 5 30 e
21	C	6 43 5 17	Libra	13 6	45	1 1 31 f
22	D	6 42 5 18		26 6	22	0 55 32 g
23	E	6 40 5 20	Scorp.	10 5	59	0 52 33 a
24	F	6 38 5 22		25 5	35	0 48 34 b
25	G	St. Matthias	Sagit.	9 5	12	0 45 35 c
26	A	6 32 5 28		23 4	49	0 41 36 d
27	B	St. Sun. in L.	Capr.	7 4	25	0 37 37 e
28	C	6 27 5 33		20 4	2	0 35 38 f
29	D	6 24 5 36	Aqua.	4 3	38	0 33 39 g

Complement of the Sun's Right Ascension at Midnight.

South Declination, Decreasing.

March hath xxxi days.

246

d.	h.	m.	8 day Sat.	} is with the Moon.
New Mo.	4	10	7 M.	
First Qu.	12	12	43 N.	
Full Mo.	19	7	9 N.	
Last Qu.	26	8	50 M.	
			26 day Jup.	
			30 day Mar.	
			6 day Ven.	
			5 day Mer.	

1	d	David B.	Aqua.	17	3	15	0	31	11	g
2	e	Chad.	Pilces	3	2	51	0	27	12	a
3	f	Lucius		18	2	27	0	25	13	b
4	g	6 16	Aries	3	2	4	0	20	14	c
5	a	4 Sun in L.		17	1	40	0	17	15	d
6	b	6 11	Taurus	2	1	16	0	14	16	e
7	c	6 9		15	0	52	0	10	17	f
8	d	6 7		29	0	29	0	7	18	g
9	e	Valerian	Gemin.	12	0	5	0	3	19	a
10	f	Equ. D. & N		25	0	19	11	59	20	b
11	g	S. George	Canc.	7	0	43	11	55	21	c
12	a	5. Sun. in L.		19	1	6	11	59	22	d
13	b	5 57	Leo	1	1	30	11	48	23	e
14	c	5 56		13	1	53	11	45	24	f
15	d	5 54		25	2	17	11	41	25	g
16	e	5 52	Virgo	7	2	41	11	37	26	a
17	f	5 50		13	3	4	11	34	27	b
18	g	Edward	Libra	1	3	27	11	30	28	c
19	a	Palm Sund.		13	3	51	11	27	29	d
20	b	Benedictus		25	4	14	11	23	30	e
21	c	5 42	Sco pio	7	4	37	11	19	31	f
22	d	5 40		19	5	00	11	16		g
23	e	Maund. Thur	Sagit.	2	5	23	11	12		a
24	f	Good Frid.		15	5	49	11	9		b
25	g	Annu. Mar.		28	6	9	11	5		c
26	a	Easter day	Capr.	12	6	31	11	1		d
27	b	5 32		26	6	52	10	57		e
28	c	Vitalius	Aquar.	12	7	17	10	54		f
29	d	5 28		26	7	39	10	50		g
30	e	5 26	Pilces	11	8	1	10	46		a
31	f	5 24		26	8	23	10	43		b

South Declin. decreas.
North Declination, increasing.

Complement of the Suns Right Ascension at Midnight.

April hath xxx days.

	d.	h.	m.		
New Mo.	3	2	11	M.	{ 4 day Satu. 23 day Jup. 28 day Mars 6 day Ven. 30 day Mer. } is with the Moon.
First Qu.	11	5	4	M.	
Full Mo.	18	3	00	M.	
Last Qu.	24	6	40	N.	

1	a	5 20	6 40	Aries	4	8	45	10	39	11	c
2	a	Low Sunday			17	9	7	10	35	12	d
3	b	5 16	6 44		29	9	29	10	31	13	e
4	c	Ambrose.		Taurus	11	9	50	10	27	14	f
5	d	5 12	6 48		23	10	11	10	24	15	g
6	e	5 10	6 50	Gem.	4	10	33	10	20	16	a
7	f	5 7	6 53		16	10	54	10	16	17	b
8	g	5 4	6 56		28	11	15	10	13	18	c
9	a	Sun. af. Ea.		Canc.	10	11	35	10	9	19	d
10	b	Sun. in Taur.			22	11	55	10	6	20	e
11	c	Leo Pope.		Leo	5	12	16	10	2	21	f
12	d	Term. begins			18	12	36	9	58	22	g
13	e	4 55	7 5	Virgo	1	12	56	9	54	23	a
14	f	4 53	7 7		15	13	15	9	50	24	b
15	g	4 52	7 8		29	13	35	9	47	25	c
16	a	Sun. af. Ea.		Libra	14	13	54	9	43	26	d
17	b	4 48	7 12		29	14	13	9	39	27	e
18	c	4 46	7 14	Scorp.	14	14	32	9	35	28	f
19	d	4 44	7 16		29	14	50	9	31	29	g
20	e	4 42	7 18	Sagit.	14	15	8	9	28	30	a
21	f	4 40	7 20		29	15	26	9	24		May
22	g	4 39	7 21	Capr.	13	15	44	9	20		c
23	a	Sun. af. Ea.			27	16	2	9	16		d
24	b	Wilfride.		Aqua.	11	16	19	9	12		e
25	c	S. Mark Eva.			24	16	36	9	9		f
26	d	4 31	7 29	Pisces	6	16	53	9	5		g
27	e	4 29	7 31		19	17	9	9	1		a
28	f	4 27	7 33	Aries	1	17	25	8	57		b
29	g	4 25	7 35		13	17	41	8	53		c
30	a	Rogation S.			26	17	57	8	50		d

North Declination, increasing.

Complement of the Sun's Right Ascension at Midnight.

May hath xxxi days.

248

d.	h.	m.		{ 2 day Satu. }	} is with the Moon.
New Mo.	2	6	8 N.	{ 20 day Jup. }	
First Qu.	10	6	7 N.	{ 27 day Mars }	
Full Mo.	17	10	17 N.	{ 6 day Ven. }	
Last Qu.	24	6	30 M.	{ 1 day Mer. }	

1	b	S. Phi. & Jac.	Taurus	7	18	12	8	46	11	e
2	r	Athanasius.		19	18	27	8	42	12	f
3	d	Inv. Crucis	Gemini	1	18	42	8	38	13	g
4	e	Ascension da		13	18	56	8	34	14	a
5	f	Boniface		24	19	10	8	30	15	b
6	g	Joh. Port. L.	Cancer	7	19	23	8	26	16	r
7	a	4 13 7 47		19	19	37	8	22	17	d
8	b	Term ends	Leo	1	19	50	8	18	18	e
9	r	Job		14	20	3	8	14	19	f
10	d	Sun in Gem.		27	20	15	8	10	20	g
11	e	4 9 7 51	Virgo	10	20	27	8	6	21	a
12	f	4 7 7 53		24	20	39	8	2	22	b
13	g	4 6 7 54	Libra	8	20	50	7	58	23	c
14	a	Whitsunday		22	21	1	7	54	24	d
15	b	4 3 7 57	Scorp.	7	21	11	7	50	25	e
16	r	Peregrine		22	21	23	7	46	26	f
17	d	4 1 7 59	Sagit.	7	21	32	7	42	27	g
18	e	3 59 8 1		22	21	41	7	38	28	a
19	f	Dunstan	Capr.	7	21	50	7	34	29	b
20	g			22	21	59	7	30	30	c
21	a	Trinity Sun.	Aqua.	6	22	8	7	26	31	d
22	b	3 54 8 6		20	22	16	7	22	June	e
23	r	3 53 8 7	Pisces	3	22	23	7	18	2 f	
24	d			16	22	30	7	14	3 g	
25	e	Corpus Chr.		28	22	37	7	10	4 a	
26	f	Term begins	Aries	10	22	44	7	6	5 b	
27	g	3 52 8 8		22	22	50	7	2	6 c	
28	a	1. Sun af. Tr.	Taur.	4	22	55	6	58	7 d	
29	b	K. Ch. II. nst.		16	23	00	6	54	8 e	
30	r	3 50 8 10		28	23	5	6	49	9 f	
31	d	3 50 8 10	Gem.	10	23	10	6	45	10 g	

Complement of the Suns Right Ascension at Midnight.

June hath xix days.

New Mo. 1d. 9 h. 16 m. M. { 26 day Satu. 2 is
 First Qu. 9 5 36 M. { 16 day Jup. 5 with
 Full Mo. 15 5 26 N. { 25 day Mar. 5 the
 Last Qu. 22 8 44 N. { 5 day Ven. 5 Moo.
 New Mo. 30 11 18 N. { 2 day Mer. 5

1	e	3 50	8 10	Gem.	22 23	14	6	41	11	a
2	f	3 49	8 11	Cancer	4 23	18	6	37	12	b
3	g	3 49	8 11		16 23	21	6	33	13	c
4	h	2 after Trin.			28 23	24	6	29	14	d
5	b	Boniface		Leo	11 23	26	6	24	15	e
6	c	Clauius			24 23	28	6	20	16	f
7	d	3 48	8 12	Virgo	6 23	30	6	16	17	g
8	e	Medardus			20 23	31	6	12	18	a
9	f	3 47	8 13	Libra	3 23	32	6	8	19	b
10	g	Margar. Q.S			17 23	32	6	4	20	c
11	h	S. Barnabas		Scorpio	1 23	32	6	00	21	d
12	b	Longer day			16 23	31	5	56	22	e
13	c	3 47	8 13	Sagit.	1 23	30	5	52	23	f
14	d	Term ends			16 23	29	5	48	24	g
15	e	3 48	8 12	Capr.	1 23	27	5	43	25	a
16	f	Rowland			16 23	25	5	39	26	b
17	g	3 48	8 12	Aquz.	1 23	23	5	35	27	c
18	h	4 after Trin.			14 23	20	5	31	28	d
19	b	Gervase			28 23	16	5	27	29	e
20	c	3 49	8 11	Pisces	12 23	13	5	22	30	f
21	d	Walburge			25 23	9	5	18		g
22	e	3 50	8 10	Aries	7 23	4	5	14		a
23	f	3 51	8 9		19 22	59	5	10		b
24	g	S. John Bapt		Taurus	1 22	53	5	6		c
25	h	5 after Trin.			13 22	48	5	2		d
26	b	John & Paul			25 22	41	4	58		e
27	c	7 Sleepers		Gem.	7 22	35	4	54		f
28	d	3 54	8 6		19 22	28	4	50		g
29	e	S. Pet. & Pau		Canc.	1 22	21	4	46		a
30	f	3 56	8 4		13 22	13	4	41	10	b

North Declin. increas.

North Declination, decreasing.

Complement of the Sun's Right Ascension at Midnight.

July hath xxxi days.

260

d. h. m. { 23 day Satu. }
 First Qu. 8 10 13 M. { 13 day Judi. } is with
 Full Mo. 15 1 23 M. { 24 day Mar. } the
 Last Qu. 22 12 33 P.M. { 5 day Ven. } Moon.
 New Mo. 30 12 17 P.M. { 3 day Merc. }

1	g	Vifita. Mary	Cancer	25	22	5	4	37	11	c
2	a	6 after Trin.	Leo	8	21	56	4	33	12	d
3	b	Martin		20	21	48	4	29	13	e
4	c	3 59 8	Virgo	3	21	38	4	25	14	f
5	d	4 00 8 00		17	21	29	4	21	15	g
6	e	Hector	Libra	00	21	19	4	17	16	a
7	f	4 3 7 57		13	21	8	4	13	17	b
8	g	4 5 7 55		27	20	58	4	9	18	c
9	a	7 after Trin.	Scorpio	12	20	47	4	5	19	d
10	b	4 8 7 52		20	20	35	4	1	20	e
11	c	4 9 7 51	Sagit.	10	20	24	3	57	21	f
12	d	Sun in Leo		24	20	12	3	53	22	g
13	e	4 12 7 48	Capric.	9	19	59	3	49	23	a
14	f	4 13 7 47		24	19	47	3	45	24	b
15	g	Swythin	Aqua.	9	19	33	3	41	25	c
16	a	8 after Trin.		23	19	20	3	37	26	d
17	b	Borolph	Pifces	6	19	6	3	33	27	e
18	c	4 17 7 43		20	18	52	3	29	28	f
19	d	Dog days b.	Aries	3	18	38	3	25	29	g
20	e	4 20 7 40		15	18	23	3	21	30	a
21	f	4 21 7 39		27	18	3	3	17	31	b
22	g	Magdalen	Taurus	9	17	53	3	13	Aug.	c
23	a	9 after Trin.		21	17	37	3	9	2	d
24	b	4 27 7 33	Gemini	3	17	22	3	5	3	e
25	c	S. James Ap.		15	17	5	3	2	4	f
26	d	4 30 7 30		27	16	49	2	58	5	g
27	e	4 32 7 28	Canc.	9	16	32	2	54	6	a
28	f	Sampfon		21	16	16	2	50	7	b
29	g	4 36 7 24	Leo	4	15	58	2	46	8	c
30	a	10 after Trin.		17	15	41	2	42	9	d
31	b	4 38 7 22	Virgo	00	15	23	2	39	10	e

North Declination, Decreasing.

Complement of the Suns Right Alcenfon at Midnight.

August hath xxxi days.

	d.	h.	m.			
First Qu.	6	3	09	P. M.	20 day Satu.	} is with the Moon.
Full Mo.	13	11	2	M.	10 day Jup.	
Last Qu.	21	6	10	M.	22 day Mars	
New Mo.	28	9	32	N.	2 day Ven.	
					28 day Mer.	

1	c	Lammas day	Virgo	15	15	6	2	35	11	f
2	d	Stephen		27	14	47	2	31	12	g
3	e	4 42	7 18	Libra	10	14	29	2	27	13
4	f	4 44	7 16		24	14	10	2	23	14
5	g	4 46	7 14	Scorpio	8	13	51	2	20	15
6	a	11 Sun af. Tr			22	13	32	2	16	16
7	b	Donatus	Sagit.	6	13	12	2	12	17	e
8	c	4 52	7 8		20	12	53	2	9	18
9	d	4 54	7 6	Capr.	5	12	32	2	5	19
10	e	Lawrence		19	12	14	2	2	20	a
11	f	4 58	7 2	Aqua	3	11	53	1	58	21
12	g	Sun in Virg.		17	11	33	1	54	22	c
13	a	12 Sun af. Tr.	Pisces	1	11	12	1	50	23	d
14	b	5 3	6 57		14	10	52	1	46	24
15	c	Assum. Mar.		28	10	31	1	43	25	e
16	d	5 6	6 54	Aries	10	10	10	1	39	26
17	e	5 8	6 52		25	9	49	1	35	27
18	f	5 10	6 50	Taurus	5	9	28	1	32	28
19	g	5 12	6 48		17	9	6	1	28	29
20	a	13 Sun af. Tr		29	8	44	1	25	30	d
21	b	Bernard	Gemi.	11	8	23	1	21	31	e
22	c	5 18	6 42		23	8	1	17	32	f
23	d	5 20	6 40	Cancer	5	7	39	1	14	2
24	e	S. Bartho.		17	7	17	1	10	3	a
25	f	5 24	6 36		29	6	54	1	7	4
26	g	5 26	6 34	Leo	12	6	32	1	3	5
27	a	14 Su. af. Tr.		25	6	9	0	58	6	d
28	b	Dog da. end	Virgo	8	5	46	0	56	7	e
29	c	5 31	6 29		22	5	24	0	52	8
30	d	5 33	6 27	Libra	6	5	1	0	49	9
31	e	Paulinus		20	4	38	0	45	10	a

North Declination, Decreasing.

Complement of the Sun's Right Ascension at Midnight.

September hath xxx days.

	d.	h.	m.		16 day Satu.	} is with the Moon.
First Qu.	4	7	43	N.	6 day Judi.	
Full Mo.	11	11	32	N.	19 day Mar.	
Last Qu.	20	1	26	M.	24 day Ven.	
New Mo.	27	11	16	M.	28 day Mer.	

1	f	Giles	Scorp.	4	4	N	15	00	41	11	b
2	g	London burn		19	3	North Decl. decreasing.	52	00	37	12	c
3	a	Anno 1666	Sagit.	3	3		29	00	34	13	e
4	b	5 44		17	3		6	00	30	14	f
5	c	Martin	Capr.	1	2		42	00	27	15	g
6	d	5 47		15	2		19	00	23	16	a
7	e	5 49		29	1		50	00	19	17	b
8	f	Nat. Mary	Aquar.	13	1		32	00	16	18	c
9	g	5 51		26	1		9	00	12	19	e
10	a	16 after Trin	Pisces	10	0		46	00	9	20	f
11	b	Sun in Libra		29	0	*	22	00	5	21	g
12	c	Equal day	Aries	6	0	South Declination, increasing.	1	00	1	22	a
13	d	and night		19	0		25	11	58	23	b
14	e	Holy Cross	Taurus	1	0		48	11	54	24	c
15	f	6 4		13	1		12	11	51	25	e
16	g	6 6		25	1		36	11	47	26	f
17	a	17 after Trin	Gem.	17	1		39	11	43	27	g
18	b	6 10		18	2		22	11	40	28	a
19	c	6 12	Cancer	1	2		46	11	36	29	b
20	d	6 14		13	3		9	11	33	30	c
21	e	S. Matthew		25	3		32	11	29	31	e
22	f	6 18	Leo	7	3		56	11	25	2	f
23	g	6 20		20	4		19	11	22	3	a
24	a	18 after Trin	Virgo	3	4		42	11	18	4	b
25	b	6 24		16	5		6	11	15	5	c
26	c	Cyprian	Libra	1	5		29	11	12	6	e
27	d	6 28		15	5		52	11	7	7	f
28	e	6 30		29	6		5	11	3	8	a
29	f	S. Michael	Scorp.	14	6		28	10	59	9	b
30	g	Hierom		29	7		1	10	56	10	c

Complement of the Suns Right Ascension at Midnight.

October hath xxxi days.

	d.	h.	m.		{ 13 day Sat. }	
Last Qu.	4	2	15	M.	{ 3 day Jup. }	} is with the Moon.
Full Mo.	11	2	39	P. M.	{ 17 day Mar. }	
Last Qu.	19	6	49	N.	{ 23 day Ven. }	
New Mo.	26	9	39	N.	{ 28 day Mer. }	

1	a	19 after Trin	Sagit.	13	7	23	10	51	11	d
2	b	6 38		28	7	46	10	48	12	e
3	c	6 40	5 20 Capri.	12	8	9	10	45	13	f
4	d	Francis		26	8	31	10	41	14	g
5	e	6 44	5 16 Aqua.	10	8	54	10	38	15	a
6	f	Faith V.		24	9	16	10	34	16	b
7	g	6 48	5 12 Pisces	6	9	38	10	30	17	c
8	a	20 after Trin		19	10	00	10	26	18	d
9	b	6 52	5 8 Aries	2	10	22	10	22	19	e
10	c	6 54	5 6	15	10	43	10	19	20	f
11	d	6 56	5 4	27	11	5	10	15	21	g
12	e	6 58	5 2 Taurus	9	11	26	10	11	22	a
13	f	Sun in Scorp		21	11	47	10	7	23	b
14	g	7 2	4 58 Gemini	3	12	8	10	3	24	c
15	a	21 after Trin		15	12	29	10	0	25	d
16	b	7 6	4 54	27	12	49	9	56	26	e
17	c	7 8	4 52 Cancer	9	13	9	9	52	27	f
18	d	S. Luke Eva		21	13	30	9	48	28	g
19	e	Ptolomy	Leo	3	13	50	9	44	29	a
20	f	7 14	4 46	15	14	10	9	40	30	b
21	g	Urula V.		28	14	29	9	36	31	c
22	a	22 after Trin	Virgo	11	14	48	9	32	No	
23	b	Term begins		25	15	7	9	28	2	e
24	c	7 20	4 40 Libra	9	15	26	9	24	3	f
25	d	Crispine		23	15	44	9	21	4	g
26	e	7 24	4 36 Scorp.	8	16	3	9	17	5	a
27	f	7 26	4 34	23	16	21	9	13	6	b
28	g	S. Sim. & Ju	Sagit.	8	16	38	9	9	7	c
29	a	23 after Trin		23	16	56	9	51	8	d
30	b	7 32	4 28 Capr.	8	17	13	9	1	9	e
31	c	7 33	4 27	22	17	30	8	57	10	f

South Declination, increasing.
Complement of the Sun's Right Ascension at Midnight.

November hath xxx days.

	d.	h.	m.		9 day Satu.	
First Qu.	2	12	00	Noon	27 day Jup.	} is with the Moon.
Full Mo.	10	8	49	Mor.	14 day Mars	
Last Qu.	18	12	00	Noon	22 day Ven.	
New Mo.	25	7	52	Mor.	24 day Mer.	

1	d	All Saints	Aqua.	6	17	46	8	53	11	g
2	e	All Souls		20	18	3	8	49	12	a
3	f	7 39 4 21	Pisces	3	18	11	8	45	13	b
4	g	7 40 4 20		16	18	34	8	41	14	c
5	a	Powd. Treas.		29	18	49	8	37	15	d
6	b	Leonard	Aries	12	19	4	8	33	16	e
7	c	Wolfride		24	19	19	8	29	17	f
8	d	7 44 4 16	Taurus	6	19	33	8	24	18	g
9	e	7 46 4 14		18	19	47	8	20	19	a
10	f	7 48 4 12	Gemin.	00	20	00	8	15	20	b
11	g	Martin		12	20	13	8	11	21	c
12	a	25 after Trin		24	20	26	8	7	22	d
13	b	Brice	Cancer	6	20	39	8	2	23	e
14	c	Lawrence		18	20	51	7	58	24	f
15	d	7 55 4 5	Leo	12	21	2	7	53	25	g
16	e	7 56 4 4		24	21	13	7	49	26	a
17	f	Q. Elizabeth	Virgo	9	21	24	7	45	27	b
18	g	7 58 4 2		20	21	55	7	41	28	c
19	a	26 after Trin	Libra	3	21	45	7	37	29	d
20	b	Edmond		17	21	54	7	32	30	e
21	c	Mary	Scorp.	1	22	3	7	28		f
22	d	8 3 3 57		16	22	12	7	24	2	g
23	e	Clement	Sagit.	1	22	20	7	20	3	a
24	f	8 5 3 55		16	22	28	7	15	4	b
25	g	Katherine	Capr.	1	22	36	7	11	5	c
26	a	27 after Tri.		16	22	43	7	7	6	d
27	b	8 8 3 52			22	49	7	3	7	e
28	c	Term ends	Aqua.	1	22	55	6	58	8	f
29	d	8 9 3 51		16	23	1	6	54	9	g
30	e	S. Andrew A		29	23	6	6	49	10	a

Complement of the Suns Right Ascension at Midnight.
South Declination, increasing.

December hath xxxi days.

First Qu.	2 d.	2 h.	00 m.	M.	6 day Satu.	} is with the Moon.
Full Mo.	10	4	4	M.	25 day Jup.	
Last Qu.	18	3	5	M.	10 day Mars	
New Mo.	24	6	14	N.	21 day Ve.	
First Qu.	31	7	00	N.	22 day Mer.	

1	f	Longinus	Pisces	13 23	11	6	45	11	b
2	g	8 11 3 49		26 23	15	6	39	12	c
3	a	Advent Sun.	Aries	9 23	19	6	35	13	d
4	b	Barbara V.		21 23	22	6	31	14	e
5	c	8 13 3 47	Taurus	3 23	25	6	26	15	f
6	d	8 13 3 47		15 23	27	6	22	16	g
7	e	8 13 3 47		27 23	29	6	18	17	a
8	f	Conc. Mary	Gemini	9 23	30	6	13	18	b
9	g	8 13 3 47		21 23	31	6	9	19	c
10	a	2. Sun. in Ad.	Cancer	3 23	32	6	4	20	d
11	b	Sun in Capr.		15 23	32	6	00	21	e
12	c	Shortest day		27 23	31	5	55	22	f
13	d	Lucia.	Leo	9 23	30	5	51	23	g
14	e	Nicasius		21 23	29	5	46	24	a
15	f	8 13 3 47	Virgo	3 23	27	5	41	25	b
16	g	8 13 3 47		16 23	25	5	36	26	c
17	a	3. Sun in Ad.		29 23	21	5	32	27	d
18	b	Christopher	Libra	12 23	18	5	27	28	e
19	c	8 10 3 50		26 23	15	5	23	29	f
20	d	8 9 3 51	Scorpio	10 23	10	5	19	30	g
21	e	S. Tho. Ap.		25 23	5	5	15	31	a
22	f	Theodosius	Sagit.	9 23	00	5	12	Jan.	b
23	g	8 6 3 54		24 22	54	5	6	2	c
24	a	4. Sun. in Ad.	Capr.	10 22	48	5	2	3	d
25	b	Christ Na.		25 22	42	4	57	4	e
26	c	S. Stephen	Aqua	10 22	35	4	53	5	f
27	d	S. John Eva.		24 22	27	4	49	6	g
28	e	Innocents	Pisces	8 22	19	4	44	7	a
29	f	8 3 3 57		22 22	11	4	40	8	b
30	g	8 2 3 58	Aries	5 22	2	4	35	9	c
31	a	8 2 3 58		18 21	58	4	30	10	d

South Declin. increas.

South Declination, decreasing.

Complement of the Suns Right Ascension at Midnight.

1 6 7 6.

The Second Part of the Sea-Mans ALMANACK.

THe last Year 1675, in the beginning of the second Part of that Almanack, I gave you an account of the several Columns contained in the foregoing Kalender, and there shewed to what Use every Column thereof tended: I shall spare that labour now, because the Columns continue the same, and with more useful ones then these I could not furnish the Kalender with, and besides, in the *Moneth of February* you have the Title of each Column Printed at the head of the same. And whereas there I gave directions how in all cases to attain the Latitude in any part of the World, by help of the Sun's declination and his Meridian Altitude; I shall now shew how the Latitude may be attained, by help of the Stars in the Night season, and not onely by certain known Stars, but by the North-Star, and the Guards, which to all Seamen are well known.

1. To find the Latitude by the Fixed Stars, any of them being upon the Meridian.

THe difference between the finding of the Latitude by any known Fixed Star, being upon the Meridian, and the Sun's Meridian Altitude and Declination is (in a manner) the same, and the same cautions are to be observed in using of the Stars.

Sea-man's Almanack. 1676

as there was in using the *Sun*, and therefore I shall be the more brief therein, but take an Example or two.

Example 1. Being at Sea, I observe the Star *Aldebaran* (or the *Bulls eye*) upon the Meridian, and taking its Meridian Altitude, by my Instrument, I find it to be 50 Deg. 30 Min. and from thence I would know the Latitude in which I am.

The Declination of the Bulls Eye, you may 2 Deg. Min.

find in the Last Years Table, to be --- 5 15 47 N.

Its Meridian Altitude observed, is --- 50 30

The Stars Declination North, Subtract --- 15 47

The Complement of the Latitude --- 34 43

Which 34 Deg. 43 Min. being taken from 90 Deg. the Remainer will be 55 Deg. 17 Min. The Latitude of the Place that I am in, North.

Example 2. Being at Sea I find the *Great dog* to be upon the Meridian, and his Altitude to be 35 Deg. 45 M. and the Stars declination (by the former Table) is 16 D. 13 M. South.

De. M.

The Stars Meridian Altitude is --- 35 45

The Stars Declination South --- Add 16 13

The height of the Equinoſtial --- 51 58

Which taken from 90 deg. leaves --- 38 02 for the Latitude in which I then am.

II. To find the Latitude by the North Star.

THe *North Star*, being very neer unto the *North Pole*, is often made use of by *Mariners*, in their Northern Navigations.

The following Table begineth at the *North*, which is the point that the *North-Star* is upon, when he is under the Pole, from which Poynt he ascendeth to the North-East, then to the East, and so to the South-East, and then to the South, where when he cometh he is as much above the Pole, as being upon the North Poynt he was below the Pole. From this South Poynt he descendeth to the South-West, then to the West, and North-West, till he come to the North Poynt again.

The

The Seamans Almanack, 1676.

258

The North-Stars Declination in these Latitudes

The Point of the Compass.		0	20	30	40	50	60	70	
		D.M.	D.M.	D.M.	D.M.	D.M.	D.M.	D.M.	
If the Guards be Ascending from the North part of the Meridian	North	2 10	2 10	2 10	2 9	2 9	2 8	2 7	Above the Pole
	N by E	1 53	1 53	1 53	1 52	1 52	1 5	1 4	
	N N E	1 31	1 31	1 3	1 3	1 29	1 28	2	
	N E by N	1 6	1 5	1 4	1 3	1 2	1 1	0 58	
	North-East	0 39	0 38	0 37	0 36	0 35	0 33	0 30	
	N E by E	0 10	0 9	0 8	0 7	0 6	0 4	1	
	E N E	0 18	0 19	0 20	0 21	0 22	0 23	0 26	
	E by N	0 49	0 50	0 50	0 51	0 52	0 53	0 56	
	East	1 15	1 15	1 16	1 17	1 18	1 19	1 21	
	E by S	1 38	1 39	1 39	1 40	1 41	1 42	1 44	
	E S E	2 02	2 02	2 02	2 02	2 12	2 22	2	
	S E by E	2 15	2 15	2 15	2 15	2 16	2 16	2 16	
	South-East	2 25	2 25	2 25	2 25	2 25	2 25	2 25	
	S E by S	2 30	2 30	2 30	2 3	2 30	2 30	2 30	
If the Guards be Descending from the South part of the Meridian	S S E	2 29	2 29	2 29	2 29	2 29	2 29	2 29	Under the Pole
	S by E	2 22	2 22	2 22	2 22	2 22	2 22	2 22	
	South	2 10	2 10	2 10	2 11	2 11	2 11	2 12	
	S by W	1 58	1 53	1 54	1 53	1 55	1 55	1 57	
	S S W	1 31	1 32	1 32	1 33	1 34	1 35	1 38	
	S W by S	1 7	1 7	1 8	1 10	1 10	1 11	1 11	
	South-west.	0 39	0 40	0 41	0 40	0 43	0 47	0 44	
	S W by W	0 10	0 11	0 12	0 13	0 14	0 19	0 16	
	W S W	0 19	0 18	0 19	0 16	0 15	0 13	10	
	W by S	0 48	0 47	0 46	0 45	0 44	0 43	42	
	West	1 15	1 14	1 13	1 12	1 11	1 10	8	
	W by N	1 39	1 39	1 38	1 37	1 36	1 35	1 33	
	W N W	2 0	1 59	1 59	1 58	1 58	1 57	1 56	
	N W by W	2 15	2 15	2 14	2 14	2 14	2 13	2 12	
	North-west	2 25	2 25	2 25	2 25	2 25	2 2	2 24	
	N W by N	2 30	2 30	2 30	2 30	2 30	2 30	2 30	Above the Pole
	N N W	2 29	2 29	2 29	2 29	2 29	2 29	2 29	
	N by W	2 22	2 22	2 20	2 20	2 22	2 21	2 21	

No

The Seamans Almanack, 1676.

Note here, That the brightest of the *Guards* (which is the *Star* you are to observe) is the first in the *Little Beare*, and is very-neer opposite to the very *Pole* point it self——
And you must note also, That when the *Guard star* is under the *Pole*, then the *Pole star* is above the *Pole*: And when the *Guard star* is above the *Pole*, then the *Pole star* is under the *Pole*, so many degrees as this Table doth afford.

The Use of the table.

Observe by help of your *Nocturnal*, upon what point of the compass the *Guard star* bears from the *Pole star*, and if you find that the *Guard star* be not upon any direct point, wait a little while till it come to some direct point, and then take the *Altitude* of the *North star* as exactly as you can. And guessing, by your *dead reckoning*, or otherwise in or neer, what *Latitude* you are, and in the head of the Table find that *Latitude* (or the neereſt unto it) and in the first column, the point of the compass upon which you found the *Guard* to be; and in that Line, just under the *Latitude*, you shall find what number of degrees and minutes the *Pole star* is either above or under the *Pole*, as the last column of the Table declares, which degrees being added to, or subſtracted from, the height of the *North star*, the true height of the *Pole*, or *Latitude*, shall be obtained.

Example. Suppose the *Altitude* of the *North Star* to be forty deg. and that the point of bearing of the *Guards* were N. N. E. Look for N. N. E in the first column, and in that Line under 30 (your estimated *Latitude*) you shall find 1 deg. 30 minutes, which subſtracted from 40 deg. (the *Altitude* of the *Pole star*) the remainder will be 38 deg. 30 min. the true *Altitude* of the *Pole* or *Latitude*. — Again, If the *Guard star* had been observed upon the *South East Point*, and his *Altitude* 62 deg. and your esteemed *Latitude* 50 deg. the *Latitude* would be found to be 64 deg. 25 min. as by the work following.

	D. M.
South East, esteemed <i>Latitude</i> 50	2. 25.
<i>Altitude</i> observed under the <i>Pole</i> . ad. 62. 00.	
The <i>Latitude</i> you are in.	64. 25.

The

The Suns (or any known Stars) Amplitude of Rise-^{ing} or Set-^{ting}, from the East or West, to-
wards the North or South.

From 30 to 36 Deg. of Latitude.

Degrees of Latitude.

	31	32	33	34	35	36
	D.M.	D.M.	D.M.	D.M.	D.M.	D.M.
1	1 10	1 10	1 11	1 12	1 13	1 14
2	2 19	2 21	2 23	2 25	2 26	2 29
3	3 29	3 33	3 35	3 38	3 40	3 44
4	4 39	4 44	4 46	4 50	4 53	4 58
5	5 50	5 54	5 58	6 2	6 6	6 11
6	7 0	7 5	7 9	7 14	7 20	7 25
7	8 10	8 16	8 21	8 27	8 33	8 40
8	9 20	9 27	9 33	9 39	9 47	9 54
9	10 31	10 30	10 45	10 52	11 0	11 0
10	11 41	11 48	11 57	12 5	12 14	12 24
11	12 52	13 0	13 9	13 18	13 28	13 39
12	14 2	14 11	14 21	14 32	14 41	14 54
13	15 13	15 23	15 33	15 45	15 56	16 9
14	16 23	16 35	16 45	16 59	17 1	17 24
15	17 34	17 46	17 58	18 12	18 25	18 40
16	18 44	18 58	19 11	19 26	19 40	19 55
17	19 56	20 10	20 24	20 39	20 55	21 11
18	21 7	21 22	21 37	21 53	22 10	22 27
19	22 19	22 35	22 51	23 7	23 25	23 44
20	23 31	23 47	24 4	24 22	24 40	25 0
21	24 43	25 0	25 17	25 37	25 56	26 17
22	25 55	26 13	26 31	26 52	27 12	27 35
23	27 17	27 26	27 46	28 7	28 29	28 53
23 ¹	27 43	28 3	28 24	28 45	29 8	29 32

Degrees of the Sun or Stars Declination.

The Suns (or any known Stars) Amplitude of
Rising or Setting, from the East or West, to-
wards the North or South.

From 36 to 42 Deg. of Latitude.

Degrees of Latitude.

	37	38	39	40	41	42
	D.M.	D.M.	D.M.	D.M.	D.M.	D.M.
1	1 15	1 16	1 17	1 18	1 20	1 21
2	2 30	2 32	2 34	2 36	2 40	2 41
3	3 45	3 49	3 52	3 55	3 58	4 2
4	5 0	5 5	5 8	5 13	5 18	5 23
5	6 16	6 21	6 26	6 32	6 38	6 44
6	7 31	7 37	7 43	7 50	7 57	8 5
7	8 42	8 54	9 1	9 9	9 18	9 26
8	10 7	10 10	10 19	10 28	10 37	10 47
9	11 17	11 27	11 37	11 47	11 58	12 9
10	12 33	12 43	12 55	13 6	13 18	13 31
11	13 50	14 0	14 13	14 25	14 39	14 53
12	15 6	15 18	15 31	15 44	16 0	16 16
13	16 22	16 35	16 50	17 4	17 21	17 38
14	17 38	17 52	18 8	18 24	18 42	19 0
15	18 55	19 10	19 27	19 45	20 4	20 23
16	20 11	20 28	20 46	21 5	21 25	21 46
17	21 28	21 47	22 6	22 26	22 48	23 10
18	22 46	23 5	23 25	23 47	24 10	24 34
19	24 4	24 24	24 46	25 9	25 33	25 59
20	25 22	25 43	26 7	26 31	26 57	27 24
21	26 40	27 3	27 28	27 53	28 21	28 50
22	27 58	28 23	28 49	29 16	29 46	30 16
23	29 18	29 44	30 11	30 40	31 11	31 43
24	29 58	30 25	30 53	31 22	31 54	32 27

Degrees of the Sun, or a Stars Declination.

The Suns (or any known Stars) Amplitude of
Rising or Setting, from East or West, to-
wards the North or South.

From 42 to 48 Deg. of Latitude.

Degrees of Latitude.

	43	44	45	46	47	48
	D.M.	D.M.	D.M.	D.M.	D.M.	D.M.
1	1 22	1 23	1 25	1 26	1 28	1 29
2	2 44	2 46	2 50	2 53	2 56	2 59
3	4 6	4 10	4 15	4 19	4 24	4 29
4	5 28	5 34	5 40	5 45	5 52	5 59
5	6 51	6 58	7 5	7 12	7 21	7 29
6	8 12	8 21	8 30	8 38	8 49	8 59
7	9 35	9 45	9 56	10 6	10 18	10 30
8	10 58	11 9	11 21	11 33	11 47	12 0
9	12 21	12 34	12 47	13 1	13 16	13 31
10	13 44	13 58	14 13	14 27	14 45	15 2
11	15 7	15 23	15 39	15 55	16 15	16 34
12	16 30	16 48	17 6	17 25	17 45	18 6
13	17 54	18 13	18 33	18 54	19 16	19 39
14	19 18	19 39	20 0	20 23	20 47	21 12
15	20 43	21 5	21 28	21 53	22 18	22 45
16	22 8	22 32	22 56	23 23	23 50	24 20
17	23 34	23 59	24 25	24 53	25 23	25 55
18	24 59	25 26	25 55	26 25	26 57	27 31
19	26 26	26 54	27 25	27 57	28 32	29 7
20	27 53	28 23	28 56	29 30	30 7	30 45
21	29 19	29 53	30 27	31 5	31 42	32 23
22	30 48	31 23	32 0	32 37	33 19	34 3
23	32 17	32 55	33 32	34 13	34 57	35 43
23 ₂	33 2	33 41	34 20	35 2	35 48	36 34

Degrees of the Suns, or a Stars Declination.

262

The Suns (or any known Stars) Amplitude of
Rising or Setting, from the East or West, to-
wards the North or South.
From 48 to 54 Deg. of Latitude.

Degrees of Latitude

	49	50	51	52	53	54
M.D.M.	D.M.	D.M.	D.M.	D.M.	D.M.	D.M.
1	1 31	1 33	1 35	1 37	1 39	1 42
2	3 3	3 6	3 10	3 15	3 20	3 24
3	4 34	4 40	4 46	4 52	4 59	5 6
4	6 6	6 14	6 22	6 30	6 39	6 49
5	7 38	7 48	7 58	8 8	8 19	8 32
6	9 10	9 22	9 34	9 46	10 0	10 15
7	10 42	10 56	11 10	11 25	11 41	11 58
8	12 14	12 31	12 47	13 4	13 22	13 41
9	13 48	14 5	14 24	14 43	15 4	15 26
10	15 21	15 40	16 1	16 23	16 46	17 11
11	16 54	17 16	17 39	18 3	18 29	18 57
12	18 28	18 52	19 18	19 44	20 13	20 43
13	20 13	20 29	20 58	21 26	21 57	22 30
14	21 38	22 6	22 38	23 8	23 42	24 18
15	23 14	23 44	24 17	24 51	25 28	26 7
16	24 51	25 23	25 59	26 36	27 16	27 58
17	26 28	27 3	27 41	28 21	29 4	29 59
18	28 6	28 44	29 25	30 8	30 54	31 41
19	29 45	30 25	31 9	31 56	32 45	33 38
20	31 25	32 9	32 55	33 46	34 39	35 35
21	33 6	33 53	34 48	35 36	36 33	37 33
22	34 48	35 40	36 32	37 29	38 31	39 37
23	36 34	37 26	38 23	39 24	40 20	41 40
24	37 26	38 20	39 20	40 21	41 29	42 43

The Suns (Or any known Stars) Amplitude of
Rising or Setting, from East or West, to-
wards the North or South.

From 54 to 60 Deg. of Latitude.

Degrees of Latitude.

	55	56	57	58	59	60
	D.M.	D.M.	D.M.	D.M.	D.M.	D.M.
1	1 45	1 47	1 50	1 53	1 56	2 0
2	3 29	3 34	3 40	3 46	3 53	4 0
3	5 14	5 22	5 31	5 40	5 50	6 0
4	6 59	7 10	7 22	7 34	7 47	8 1
5	8 45	8 58	9 13	9 28	9 45	10 2
6	10 30	10 47	11 4	11 23	11 43	12 4
7	12 16	12 35	12 56	13 18	13 41	14 6
8	14 2	14 24	14 48	15 14	15 41	16 10
9	15 48	16 15	16 42	17 10	17 41	18 14
10	17 57	18 6	18 36	19 8	19 42	20 19
11	19 26	19 57	20 31	21 6	21 45	22 26
12	21 15	21 50	22 26	23 6	23 49	24 34
13	23 5	23 43	24 23	25 7	25 54	26 44
14	24 57	25 38	26 22	27 10	28 1	28 56
15	26 40	27 34	28 22	29 14	30 10	31 10
16	28 43	29 32	30 24	31 21	32 22	33 27
17	30 39	31 31	32 28	33 29	34 35	35 47
18	32 36	33 33	34 34	35 40	36 52	38 10
19	34 35	35 36	36 43	37 54	39 13	40 37
20	36 36	37 42	38 53	40 12	41 37	43 10
21	38 40	39 51	41 9	42 34	44 40	45 47
22	40 46	42 4	43 27	44 59	46 40	48 32
23	42 56	44 20	45 50	47 30	49 21	51 24
24	44 2	45 30	47 2	48 49	50 44	52 53

Degrees of the Suns, or a Stars Declination.

The Seamans Almanack, 1676.

Concerning the foregoing Tables of Amplitudes, and the Uses of them.

THe foregoing Tables do shew the *Amplitude* that the *Sun*, or any *fixed star* that is between the *tropicks*, whose *declination* is known, shall have at the time of its *rising*, or *setting*. Now, the *Amplitude* of the *Sun* or a *star*, is the distance of the *Sun*, or that *stars* rising from the true *East*, or setting from the true *West*—points of the *Heavens*. And the *uses* that may be made of these tables are principally these three following.

I. By knowing the *Latitude* of the Place, you are in, and what *declination* the *Sun* or a *Star* hath, you may find, at what distance the *Sun* or *Star* doth rise from the true *East*, or doth set from the true *West* Points of the *Horizon*, which is the *Amplitude*.

II. By knowing of the *Suns* *Amplitude* and *declination*, you may find the *Latitude*. And

III. By having the *Amplitude* in a known *Latitude* you may find the *Variation* of your *Compass*.

Examples of all these.

I. The *Latitude* of the Place (4 deg.) and the *Declination* of the *Sun* (15 deg. North) being given, to find the *Suns* *Amplitude* of *Rising* or *Setting*.

Look in the head of the Table for 4 deg. (the *Latitude* given) and for 15 deg. (the *Suns* *declination* given) in the first column towards the left hand, and in that Line (under 4 deg.) you shall find 19 deg. 45 m. which shews that the *Sun* does rise 19 deg. 45 m. from the *East* point towards the *North*, and doth set 19 deg. 45 m. From the *West* point towards the *North*, because the *Sun* hath *North* *declination*. ——— But (in the same *Latitude* of 40 deg.) if the *Suns* *declination* had been 15 deg. *South*, then the *Amplitude* of the *Suns* rising would have been 19 deg. 45 m. from the *East* towards the *South*, and his *Amplitude* of setting, from the *West* 19 deg. 45 m. Southward. So the *Latitude* being as before 40 deg. and the *declination* *North* 15 deg.

The Amplitude of $\left\{ \begin{array}{l} \text{Rising will be E N E. 2 d. 45 m. Easter.} \\ \text{Setting will be W S W. 2 d. 45 m. Wester.} \end{array} \right.$

But if the Declination had been 15 deg. South, then

The Amplitude of $\left\{ \begin{array}{l} \text{Rising would be E S E 2 d. 45 m. Easter.} \\ \text{Setting would be W S W 2 d. 45. Wester.} \end{array} \right.$

So again, if the Latitude had been 52 deg. and the declination 20 deg. North, the Amplitude would have been found 33 deg. 46 m. Northerly.

Note, that if you cannot find your just Latitude in the head of the table, nor the just declination in the first Column, then to find the Amplitude you must make proportion. As in the Example following.

Let the Latitude be 51 de. 3 m. (which is the Latitude at London) and let the declination be 12 de. 20 m. North, and the Amplitude were required.

If you look at the head of the Table for the Latitude of 51 de. 30 m. you cannot there find it, but you find the Latitudes of 51 de. and of 52 deg. and if you look for 12 deg. 20 m. of declination, you cannot find that, but you may find 12 de. and 13 de. of declination. Now, for the Latitude 51 de. and declination 12 de. the Amplitude is 19 de. 18 m. And for Latitude 52 de. and declination 12 de. the Amplitude is 19 de. 44 m. the difference between them is 26 m. then say by the rule of proportion. If 1 de. or 60 m. of Latitude, give 26 m. what shall 30 m. give, if you multiply and divide you shall find 13 m. which 13 m. being added to 19 de. 18 m. (the Latitude of 51 de.) makes 19 de. 31 min. for the Amplitude in the Latitude of 51 de. 30 m. when the Sun hath 12 de. of declination. Again:

The Amplitude of 51 de. at 12 de. is 19 de. 18 m. as before, and the Amplitude at 13 de. is 20 de. 38 m. the difference is 1 de. 40 m. or 100. Wherefore say by the rule of proportion. If one de. or 60 m. of declination, give 100 min. of Amplitude, what shall 20 m. give? Multiply and divide, and you shall have in your Quotient 33 m. which added to 19 de. 31 m. the Sun is 20 de. 4 m. and such is the Amplitude in the Latitude of 51 de. 30 m. when the Sun hath 12 de. 20 m. of declination.

II. The Suns Amplitude being 8 deg 30 m. and the Suns declination 6 deg. I demand the Latitude.

Look

The Seaman's Almanack, 1676.

Look in your Table for 6 deg. of *declination*, in the first column, and cast your eye along that line, till you find 8 deg. 30 min. (or the nearest number thereunto) o stand in the same line, and the figures that stand over that Number is the Latitude sought.

I hus, turning over the Table, against 6 deg. of *declination* (in the third Page) you shall find 8 de. 30 min. to stand in the third column against 6. and at the head of that column, you shall find 45, which shews the Latitude to be 45 deg. And so if the *declination* be 21 deg. and the *Amplitude* 27 deg. 3 min. the Latitude would be found to be 38 degrees.

III. By help of the *amplitude* to find the variation of the compass.

IN the Latitude of 27 deg. the Suns *declination* being 22 de. North, the *Amplitude* (by the Table) will be found to be 24 de. 52 m. North; because the Sun hath North *declination*. Now of the *Amplitude* thus found, there is much use made at Sea, for (besides the finding of the Latitude) thereby also may be found the *Variation of the compass*, and the manner how to perform that necessary work, is, as followeth.

Let the circumference, or outermost edge of the Card, or Fly of the Compass, be divided into 360 deg. and the Points of the Wires (or Needle) to be placed directly under the Flower de Luce, or North, or South Points; you are now to observe at Sun rising or setting, how many degrees the sun rises or sets from the East or West points of the Compass, which number of degrees, if they agree with the *Amplitude* found, by this position, and be on the same side, then hath the Compass no *Variation*, but if they differ, look how many degrees that difference is, for so much doth the compass varie.

Example. Finding the *Amplitude*, as before, to be 24 deg. 52 m. Northerly. I thereby know, that the Sun should set almost 25 deg. from the West towards the North: But observing, at sun setting, with my compass, I find it to set but 19 degrees from the West Point, to the Northwards, from whence I gather that the *Variation of my compass*, is almost 6 deg. And in this manner, may you any Morning or Evening find the quantity of the compasses variation. Now

To find which way the Compass Varieth.

IF the degrees of the compass, which directly respects the Sun at his rising or setting (namely the degrees of amplitude found as before) be more towards the right hand, then the suns rising or setting, the Variation is Easterly, but if it be more towards the left hand, the variation is Westerly, because when a mans face is towards the North, the East is on his right hand, and the West on his left.

As in this Example, I find by the Amplitude, that the Sun should set, almost 25. de. from the West point of the compass towards the North, but setting the Sun, I find that the 25 deg. of my compass is more towards the right hand then the place of sun setting, therefore I conclude the variation is Easterly.

And in this manner is the variation of the compass found to be almost 6 deg. Easterly. so that the North point of the compass shews not the true North, but points almost 6 deg. Eastward of the North, and consequently all the other Points of the compass direct more towards the right hand then they should do by almost 6 deg. and the like, in all points, is to be understood, if the Observation had been made at the suns rising.

Note here, That it is fittest to make these Observations at Sea, when the Sun seems to be a little above the Horizon, namely, when the loweredge of the Sun seems almost to touch the Horizon, for then is the true time of setting, although by reason of his refraction and parallax he seems to be above it.

THe last year I gave you a Catalogue of the Longitude, and Latitude of all the principal Harbours, Headlands & Islands upon the Coasts of England, Scotland & Ireland, their Longitude being accounted from the Meridian of London, either Eastward or Westward. I shall now continue the same, giving you

The Seafarers Almanack, 1676.

A Catalogue of the Longit. and Latitude of the Harbours, Headlands, &c. upon the Sound, the Coasts of Holland, Flanders, and the Island of Iſeland.

The Sea Coasts in the Sound.

Names of places.	Latitude.		Longitude.	
	D.	M.	D.	M.
Walle Sound	58	25	6	16
Morde	58	37	6	38
Long Sound	59	7	7	30
Holm Sound	59	8	8	20
Nading	57	53	9	40
Cape Cole	57	0	10	12
Elſinbro	56	46	10	36
Scarlet Iſland	56	40	10	38
Faſtinboro	56	2	10	25
Chipping	56	53	13	3
Enland	57	42	13	48
Yaffro	58	10	13	34
Strickholm	58	23	13	0
Frovenboro	58	48	12	52
Stockholm	58	49	14	42
Buſhoers	60	9	16	30
Abbo	61	8	18	4
Roftbrugh	61	3	19	40
Burga	61	2	21	50
Patting	61	0	23	21
Wakalo	61	16	24	18
Wibro	61	16	24	36
Caſt. Rand.	60	12	23	27
Nergin	60	10	19	50
Ogſhelm	59	58	19	8
Dagaratt	59	44	18	31
Ardenbro	59	5	18	42
Wille	59	6	19	42
Shorham	58	58	21	6
Parna	58	52	21	30

North Latitude.

East Longitude.

Runer

Names of the places.	Latitude.	Longitude.
	D M	D. M.
Runen	50 38	19 40
Righa	57 50	21 1
Dines Nasse	58 22	18 31
Dormamel	56 55	18 10
Heda	55 53	16 5
Gotland	58 20	15 58
Farro Sound	58 48	16 29
Gorhe Sand	59 15	16 30
Erttholm	56 10	12 14
Burntholm	56 0	12 16
Jakmond	55 23	11 20
Witmond	55 20	11 8
Mooan	55 41	10 5
Copenhagen	56 17	9 54
Elenmore	56 40	9 57
Anall	57 8	9 17
Lizol	57 35	8 45
The Scaw	57 52	8 27

North Latitude.

West Longitude.

The Sea-Coasts of Holland and Flanders, from the Scaw to Callis.

The Names of Places.	Latitude.	Longitude.
	D. M.	D. M.
Stomar	55 17	6 44
Holike Land	54 30	6 14
Hamborough	54 4	8 2
Breme	53 50	7 2
Embden	53 44	5 42
Amaland	53 40	4 52
Skaling	53 35	4 50
The Fly	53 30	4 48
The Taxell	53 20	4 52
Amsterdam	52 40	4 37
Rotterdam	52 5	4 24
Antwerp	51 37	4 22
The Brill	52 8	3 44

North Latitude.

East Longitude.

Zealand

The Seamans Almanack, 1676.

Zeland	51 48	3 41
Sluis	51 38	3 47
Ostend	51 30	3 5
Dunkirk	51 18	2 25
Callis	51 13	1 52

The Sea-Coasts of France and Portugal

<i>Names of Places.</i>	<i>Latitude.</i>		<i>Longitude.</i>
	<i>D.</i>	<i>M.</i>	<i>N. S.</i>
Callis	51	13	1 52
Deip	50	15	1 25
St. Valleri	50	8	0 56
Saine head	50	4	0 4
Roye	49	46	0 20
Cape Barflaw	49	57	0 52
Cape Hagg	50	4	1 32
Alderny	50	2	1 47
Caskats	50	7	2 15
Arme	49	48	2 19
Garnafs	49	43	2 35
Sark	49	37	2 15
Farze	49	30	2 0
Boffin	49	19	1 42
Chosoe	49	5	1 40
St. Mallas	48	45	1 45
Sarra Isles	49	7	3 22
Morlias	48	54	3 45
Island de Basc	49	1	3 57
Ushant	48	48	5 19
Conquer	48	45	5 5
Brist	48	35	4 25
Camaritabay	48	25	4 28
Scames	48	4	5 1
Parker	48	0	5 25
Peanes	47	35	4 14
Glanants	47	33	3 50
Groy	47	35	3 30
Ballile	47	19	3 20

Cardinals

The Seaman's Almanack, 1676. 277

Names of places.	Latitude.		Longitude	
	D.	M.	D.	M.
Cardinals	47	27	3	0
Rodon	47	55	1	51
Nants	47	45	1	9
Piller	47	4	2	2
Uls	46	44	2	4
Barges	46	30	1	30
St. Martius	46	16	0	55
Olloron	45	58	0	54
Mamofin	45	49	0	50
Topper	45	36	1	35
Rochell	46	17	0	30
Shorant	46	0	0	28
Bloy	45	28	0	5
Burdeaux	45	10	0	20 E.L.
St. Abastian	43	40	1	5
Bilbo	43	41	2	4
St. Andrea	43	43	2	48
Lyons	43	49	3	18
Cape Pinas	44	4	4	32
Cape Artingal	44	8	5	30
Sazarka	43	38	7	10
Cape Corian	43	21	8	20
Cape Finisterre	43	10	8	19
Isles of Bogon	42	22	7	24
Burlings	39	43	7	52
Rock of Lisbon	39	0	7	28
Lisbone	39	8	6	30
Cape St. Vincent	37	0	6	42
Cape St. Maria	36	52	5	48
Cales	36	32	4	0

West Longitude.

North Latitude.

West Longitude.

The Sea-coasts about the Island of Island

Names of the places.	Latitude.		Longitude.	
	D. M.		D. M.	
Grimes Hole	63	13	18	10
Gawain Isles	63	48	20	30
Westmain Isles	63	17	18	17
Rooke Point	64	0	19	13
Snow Hill	65	11	20	14
Fair Foreland	65	40	20	17
Rage Point	66	40	17	24
Marze	67	8	15	6
Grimsa	66	42	14	44
Long Nasse	66	26	13	0
Bargafar Point	65	27	12	25
Silly.	64	50	15	20
Horn	63	42	15	40
Merchant Foreland	63	52	17	6
Mage N. fl.	61	22	8	15

North Latitude.

West Longitude.

Sir Jonas Moore, His Catalogue of Forraign Weighes and Measures, carefully compared with the ENGLISH.

	The Eng- the Englif				The pound
	with Foot	Foot	into	into	Avoirdupois, into
	into 1000	1000	equal parts.	tenth part of Inches	100 parts
	In a land				
	Parrs.	F.	In.	P.	100 parts.
London Foot	1.000	0	12	0	1.00
France.					
Paris the Royal Foot	1.068	1	00	8	0.93
Lyon Ell	3.976	3	11	7	1.09
Boloyne Ell	2.076	2	00	8	0.89
The 17 Provinces					
Amsterdam } Foot	0.942	0	11	3	.03
} Ell	0.269	2	03	2	9
					Antwerp

Antwerp { Foot	.946	0	11	3	0.98
Ell	2.273	2	03	3	
Brill Foot	1.103	1	01	2	
Dort Foot	1.184	1	02	2	
Rynland, or { Foot	1.033	1	00	4	0.95
Laden { Ell	2.260	2	03	1	
Lorain Foot	.958	0	11	4	0.98
Mecalin Foot	.919	0	11	0	0.98
Middleborough Foot	.991	0	11	9	0.98

Germany	Thousand Parts.	F.	In.	Par.	10. Aveird. 100 parts.
Strasborough Foot	0.920	0	11	0	0.93
Bremen Foot	0.964	0	11	6	0.91
Cologne Foot	0.954	0	11	4	0.97
Frankford, and { Foot	0.948	0	11	4	0.93
Menain { Ell	1.126	1	09	9	
Hamborough Ell	1.905	1	10	8	0.93
Leipsig Ell	2.260	2	03	1	1.17
Lubick Ell	1.903	1	09	8	
Noremburg	1.06	1	00	1	0.94
— Ell	2.227	2	03	3	
Bivaria	0.954	0	11	4	
Vtenna	1.053	1	00	6	0.83

Spain and Portugal.					
Spanish Palm, or the {	0.751	0	09	0	0.99
Palm of Castile- }					
The Spanish Vare, or {	3.004	3	00	0	
Rod (four Palms-) }					
1	1.001	1	00	0	
Their Foot is $\frac{1}{3}$ of the vare	2.750	2	09	0	1.06
Lisbon Vare					
Gibraltar Vare	2.761	2	09	1	1.03
Toledo { Foot	0.899	1	10	7	1.00
{ Vare	2.685	2	08	2	

Italy.	Thousand		10. Avord.		
	Parts.	F.	In.	Par.	100 parts.
Roman Foot on the Monument of Cossutius-- of Statelius.	0.997	0	11	6	1.23
Roman palm for Building, whereof Ten make the Canna--	0.972	0	11	7	
Bononia { Foot	1.204	1	02	4	1.27
{ Ell	2.147	2	01	7	
Perch, whereof 100 to a mile	12.040	12	00	5	
Florence Brace or Ell	1.913	1	11	0	1.23
{ Palme	0.861	0	09	6	1.43
Naples { Brace	2.100	2	01	2	
{ Canna	6.880	6	10	5	
Genna palm	0.830	0	09	6	1.22
Mantova Foot	1.569	1	06	8	1.43
Vitan Calamus	6.544	6	06	5	1.40
Parma Cubit	1.866	1	10	4	1.43
Venice Foot	1.162	1	01	9	1.53
Other places.					
Dantz.ck { Foot	0.944	0	11	3	1.19
{ Ell	1.903	1	10	8	
Copenhagen Foot	0.965	0	11	6	0.94
Prague in Bohemia Foot	1.026	1	00	3	1.06
Leg Foot	1.831	1	09	9	
China Cubit	1.016	1	00	2	
Turin Foot	1.062	1	00	7	
Cairo cubit	1.824	1	09	9	1.61
Persian Arash.	3.197	3	02	3	
Turkish pike at Constantinople the Greater---	2.200	2	01	4	0.86
The greek Foot	1.807	1	00	1	
Montus Universal Foot	0.675	0	08	11	

Advice

Advice Concerning Letters which may be sent from
L O N D O N.

On Monday, to

France,	Sweedland,
Spain,	Denmark,
Italy,	Kent,
Germany,	the Downs.
Flanders,	

On Tuesday, to

Holland,	Ireland,
Germany,	Scotland,
Sweedland,	England,
Denmark,	Wales.

On Wednesday, to

All parts of Kent and the Downs.

On Thursday, to

France,	All parts of
Spain,	England and
Italy,	Scotland.

On Friday, to

Flanders,	Denmark,
Germany,	Holland,
Italy,	Kent,
Sweedland,	The Downs.

On Saturday, to

All parts of England, Wales, Scotland, and Ireland.

Letters are returned from all parts of England, and Scotland certainly, every *Munday*, *wednesday*, and *Friday*.

From *Wales*, every *Munday* and *Friday*.

From *Kent* and the *Downs* every day.

From other parts more uncertainly, in regard of the Sea.

The Seamans Almanack, 1676.

**A Catalogue of some Principal Marts and
Fairs kept in Divers Parts of the World:
their Begining, Continuance, and Ending.**

Fairs or Marts in Italy.

- N**Ocera, begins the first sund. in Lent, continues 15 days.
Fuligno, begins Apr 25, continues till the last of May.
V. enice, begins on Ascension Even, continues 15 days, a most
Glorious Fair for all sorts of Vessels of silver and gold.
Ravenna, begins May 1, continues 13 days.
Taranto, begins May 1, continues 3 days.
Toscanello, begins May 1, continues 8 days.
Orvietto, begins Novemb. 12, continues 8 days.
Orvietto, begins on Corpus Christi Day, continues 8 days.
Salerno, begins May 10, continues 15 days.
Lanciano, begins the last Tuesday of May, continues 15 days.
Rimini, begins June 20, continues till July 25.
Cosenza, begins July 1, continues 8 days.
Cosenza, begins July 25, continues 8 days.
Squillace, begins July 8, continues 8 days.
Montilione, begins July 21, continues 8 days.
Cecina, begins August 1, continues all that month, v. 31 days.
Istria, in the province of Mantua, begins Aug. 10, contin. 3. days.
Mandonadella-gratia, in the suburbs of Mantua, begins
Aug. 15, continues 8 days.
Ferrara, begins Aug. 15, continues 16 days.
Lanciano, begins the last Thursday in Aug. continues 15 days.
Favara, begins Septemb. 1, continues that whole month.
Modena, begins Septemb. 14, continues 8 days.
Recanati, begins Septemb. 15, continues till November 15.
S. I rnoo, begins September 21, continues 15 days.
Crema, begins September 25, continues 16 days.
Trani, begins October 4, continues 8 days.

Rovigo,

278

The Seafmans Almanack, 1676.

Rovigo and Pizighiton, begins Oct. 29, continues 10 days.
Vicenza, begins Oct. 16, continues 15 days.
Trevizo, begins October 22, continues 15 days.
Nocera, begins November 1, continues 15 days.
Barletta, begins November 11, continues 8 days.
Pelara, begins November 15, continues till Christmas.
Udine, begins November 26, continues 5 days.
Bari, begins December 26, continues 10 days.
Taranto, begins January 17, continues 8 days.

Four Fairs at Lyons in France.

The 1 begins the first Munday after Epiphany, contin. 15 Days.
The 2 begins the first Munday after Easter, continues 15 days.
The 3 begins the first Munday in August, continues 15 days.
The 4 begins the first Munday in September, contin. 15 days.

Three Fairs or Marts in Antwerp.

The 1 begins the 1 Mund. after Easter, contin. a whole month.
The 2 begins at Pentecost, and continues a whole month.
The 3 begins at St. Martin, but continues a whole month.

Fairs or Marts in Germany.

Frankfort, begins 15 days before Easter, continues 5 days.
Liux, begins a week after Easter, continues 8 days.
Argentina, begins June 25 continues 14 days.
Crembs, begins July 25, continues 8 days.
Liux, begins August 24, continues 8 days.
Frankfort, begins September 9, continues 15 days.
Salsberg, de S. Robert, begins Sept. 24, continues 15 days.
Clembs, begins October 28, continues 8 days.
Fusta, begins January 15, continues 10 days.

Three Fairs or Marts at Bolsan.

The first begins at Mid-Lent, continues 14 days.

The

The Seaman's Almanack, 1676.

The second begins September 1, continues 14 days.

The third begins the first sund. after S. Andrew, cont. 25 days.

Fairs or Marts in Spain.

Villiabon, begins the first day of Lent, continues all Lent.

Rioseco, begins 3 days after Easter, cont. till after Pentecost.

Medina, del. Campo. begins November 1, continues till 8 days before Christmas.

Fairs or Marts in Portugal.

Lamotto, begins May 1, continues 15 days.

Beggia, begins August 15, continues to that months end.

Penella, begins September 29, continues 15 days.

Rossa begins August 15, continues 16 days.

Pennella, begins January 20, continues 15 days.

Fairs or Marts in Sicily.

Lentina, begins April 15, continues 8 days.

Messina, begins August 25, continues 20 days.

Catani, begins August 15, continues 24 days.

Cartagiron, begins October 24, continues 15 days.

Piazza, begins October 28, continues 8 days.

Castro Gionane, begins November 13, continues 15 days.

Sarragozza, begins December 13, continues 15 days.

Palermo begins May 1, continues 5 days.

Marts or Fairs in the Island of Cyprus.

Chilaco, begins December 29, continues 3 days.

San Demetrio, begins October 26, continues 3 days.

San Giorgio, begins November 2, continues 3 days.

S. Nixhalas, begins December 6, continues 3 days.

28 OCT 62

Impiger extremos, currit Mercator, ad Indos.

Per Mare, Panperiem fugiens; per Saxa, per Ignem.

**The industrious Merchant, runs to th' Indian shore,
Through fire and water, dreading to be poor.**

F F N I S.

